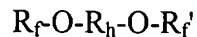


What is claimed is:

1. A compound represented by the general formula:



wherein:

O is oxygen;

R_f and $R_{f'}$ are, independently, a perfluoroaliphatic group, and if R_f and $R_{f'}$ contain branched alkylene groups, then R_f and $R_{f'}$ contain at least 4 carbons;

R_h is independently a linear, branched or cyclic alkylene group having from 2 to about 8 carbon atoms and at least 4 hydrogen atoms, and wherein the hydrofluoroether compound is free of $-O-CH_2-O-$.

2. The compound of claim 1 wherein R_f and $R_{f'}$ contain, independently, at least about 2 carbon atoms.

3. The compound of claim 2 wherein R_f and $R_{f'}$ contain, independently, about 3 to about 20 carbon atoms.

4. The compound of claim 2 wherein R_f and $R_{f'}$ contain, independently, 3 to about 7 carbon atoms.

5. The compound of claim 1 wherein R_f and $R_{f'}$ contain at least 5 fluorine atoms.

6. The compound of claim 5 wherein R_f and $R_{f'}$ contain, independently, at least 7 fluorine atoms.

7. The compound of claim 5 wherein R_f and $R_{f'}$ contain, independently, at least 9 fluorine atoms.

8. The compound of claim 1 wherein R_f and R_f' are, independently, C_xF_{2x+1} , where x is about 2 to about 8.

9. The compound of claim 8 wherein x is 3 or 4.

10. The compound of claim 1 wherein the compound has a viscosity is less than 100 centistokes ($100 \times 10^{-6} \text{ m}^2/\text{s}$) at -50°C .

11. The compound of claim 10 wherein the compound has a viscosity of less than 50 centistokes ($50 \times 10^{-6} \text{ m}^2/\text{s}$) at -50°C .

12. An apparatus requiring heat transfer comprising:

(a) a device; and

(b) a mechanism for transferring heat to or from the device, comprising using a heat-transfer fluid,

wherein the heat transfer fluid is represented by the following structure:



wherein:

O is oxygen;

R_f and R_f' are, independently, a perfluoroaliphatic group; and

R_h is independently a linear, branched or cyclic alkylene group having from 2 to about 8 carbon atoms and at least 4 hydrogen atoms, and

wherein the hydrofluoroether compound is free of $-O-CH_2-O-$.

13. The apparatus according to claim 12, wherein the device is selected from the group consisting of microprocessors, wafers used to manufacture semiconductor devices, power control semiconductors, electrical distribution switch gear, power transformers, circuit boards, multi-chip modules, packaged and unpackaged semiconductor devices, chemical reactors, nuclear reactors, fuel cells, lasers, and missile components.

14. The apparatus according to claim 12, wherein the device is heated.

15. The apparatus according to claim 12, wherein the device is cooled.

16. The apparatus according to claim 12, wherein the device is maintained at a selected temperature.

17. The apparatus according to claim 12, wherein the mechanism for transferring heat is selected from the group consisting of temperature controlled wafer chucks in PECVD tools, temperature controlled test heads for die performance testing, temperature controlled work zones within semiconductor process equipment, thermal shock test bath liquid reservoirs, and constant temperature baths

18. A method for transferring heat comprising the steps of:

(a) providing a device; and

(b) using a heat-transfer fluid to transfer heat to or from the device, wherein the heat-transfer fluid is represented by the following structure:



wherein:

O is oxygen;

R_f and R_f' are, independently, a perfluoroaliphatic group; and

R_h is independently a linear, branched or cyclic alkylene group having from 2 to about 8 carbon atoms and at least 4 hydrogen atoms, and

wherein the hydrofluoroether compound is free of $-O-CH_2-O-$.